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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,169	09/18/2003	Alan K. Snell	21924.NP	6319
36790	7590	05/11/2005	EXAMINER	
TILLMAN IVSAN, PLLC			GIBSON, KESHIA L	
PO BOX 471581			ART UNIT	
CHARLOTTE, NC 28247			PAPER NUMBER	

3761

DATE MAILED: 05/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/665,169	<b>Applicant(s)</b> SNELL, ALAN K.	
	<b>Examiner</b> Keshia Gibson	<b>Art Unit</b> 3761	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 7-11, 16, 17 and 42-74 is/are pending in the application.
- 4a) Of the above claim(s) 7-11, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 42-53 and 55-74 is/are rejected.
- 7) ☒ Claim(s) 54 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/1/04, 3/9/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/15/04 &amp; 3/7/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election of Group I, Species I, drawn to a vacuum-packed diaper (Fig. 2B) in the reply filed on 3/4/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 7-11 and 16-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species of Group I, Species I, drawn to a vacuum-packed diaper (Fig. 2B), there being no allowable generic or linking claim.

These claims are drawn toward a restraint and are therefore considered representative of the non-elected species, Group I, Species II, drawn to a restrained diaper (Fig. 11B). As a result, these claims have been withdrawn from consideration.

### ***Information Disclosure Statement***

3. The information disclosure statements (IDS) submitted on 1/15/2004 and on 3/4/2005 were considered by the examiner, except for 3 documents listed on the IDS filed on 1/15/2004. These documents are foreign patents (DE 3923289, CH 671145, and FR 2583388); no translations, abstracts, or descriptions within the specification have been provided. The examiner has only considered any drawings disclosed within this documents. Accordingly, except as indicated otherwise, the submission is in

Art Unit: 3761

compliance with the provisions of 37 CFR 1.97 and the information disclosure statement is being considered by the examiner.

### ***Specification***

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The “an intermediate volume” of part h of Claims 48 and 71 does not appear to be supported by the specification. As a result, it renders the language unclear as to what constitutes “an intermediate volume” and also as to during which part of the packaging process it exists. For purposes, it is considered to be a volume that exists during the stage of actually evacuating air from the package to reduce the nominal volume of the diaper to the reduced volume.

5. The amendment filed 3/4/05 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

a) The paragraph describing a vacuum-packing method and added to the specification on page 9, lines 2-17 is noted by the applicant to be supported by incorporated material of the provisional application to which the present invention claims benefit (US 60/451,433). However, the closest support within US 60/451,433 for this new paragraph of the current application appears to be “Step 6” under “Specification for a Method for Miniaturizing a Diaper by Folding and Vacuum Sealing.” This step makes

Art Unit: 3761

reference to Pictures 1 and 12-15, which are unclear photographs. Furthermore, color photographs and color drawings are not accepted unless a petition filed under 37 CFR 1.84(a)(2) is granted. Any such petition must be accompanied by the appropriate fee set forth in 37 CFR 1.17(h), three sets of color drawings or color photographs, as appropriate, and, unless already present, an amendment to include the following language as the first paragraph of the brief description of the drawings section of the specification:

The patent or application file contains at least one drawing executed in color. Copies of this patent or patent application publication with color drawing(s) will be provided by the Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings and black and white photographs have been satisfied. See 37 CFR 1.84(b)(2).

The provisional seems to provide some support for the method paragraph added to the specification, but fails to fully support it, due mainly to the lack of clarity of the provisional application. The applicant needs to specifically point out the material in the provisional that supports the newly added paragraph on page 9 of the amended specification.

b) On page 5, lines 4-10 and page 11, line 30—page 12, line 12, the applicant has amended that specification to add, remove, and interchange various references to volume and density. Although influenced by one another, volume and density are distinctly different units of measure, and, therefore, not readily interchangeable. Thus, the current amendments are considered to result in a change in the scope of the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 45-47 and 68-70 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for certain conditions involving about 5 Mbar and another set of conditions involving 1 or 2 Mbar, does not reasonably provide enablement for a pressure less than 10 mbar, a pressure less than 20 mbar, or a pressure between about 5 mbar and about 1mbar. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. By standard convention, abbreviation Mbar is representative of megabars ( $10^6$  bars) while the abbreviation mbar is representative of millibars ( $10^{-3}$  bars). Thus, a value of 5 Mbar is different than a value of 5 mbars. The same reasoning applies for 1 or 2 Mbar in comparison to 1 (or 2) mbar. Furthermore, the specification describes pressures for the vacuum at multiple elevations and/or conditions. These descriptions imply that the desired pressure for the vacuum will vary based on the elevation at which the packaging takes place. Because of difference between the values stated in the specification and those stated in the claims, in addition to the fact that the specification fails to distinctly

Art Unit: 3761

point out the standard conditions in which the vacuum packing should occur, the specification is considered non-enabling for Claims 45-47 and 68-70.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. The term "on the order of millibars (mbar)" in claims 43-44 and 66-67 is a relative term that renders the claim indefinite. The term "on the order of millibars (mbar)" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The term "on the order of millibars (mbar)" could include any number of millibars from 0 to infinity, especially considering that the specification fails to specifically point out or suggest the conditions in which the vacuum packing should occur.

### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 3761

11. Claims 42-44, 48-53, 55-61, 63-67, and 71-75 are rejected under 35

U.S.C. 102(e) as being clearly anticipated by Kellenberger et al. (2004/0167489 A1).

In regard to Claim 42, Kellenberger et al. disclose a packaged diaper 190A-C comprising a single compressible absorbent diaper having a nominal volume in its unrestrained state; the diaper is reduced to a reduced volume by placing the diaper into an air impermeable encasement, then evacuating air from it to create a partial vacuum. The diaper is implicitly disclosed as being unsoiled since the diaper encasement is to be opened later for use of the enclosed diaper. The volume of the packaged diaper is less than that of the unrestrained diaper (which has the nominal volume) (Figs. 1-2 and 11; [0024]-[0025], [0051]-[0052], [0057-0060], [0068]-[0071]; Examples 1-9).

In regard to Claim 43, Kellenberger et al. disclose that a pressure differential is created within the encasement [0052]. As stated earlier, the language "on the order of millibars" is considered indefinite; a result, this phrase has been given little patentable weight.

In regard to Claim 44, as discussed for Claims 42 and 43, Kellenberger et al. disclose a packaged diaper comprising a single diaper enclosed an air impermeable encasement, and then reduced in volume by evacuating air from the encasement to create a partial vacuum. And again, "on the order of millibars" is considered indefinite as has been given little patentable weight.

In regard to Claim 48, as discussed for Claim 42, Kellenberger et al. meet the claim limitations for items a-f of the claimed invention. Kellenberger et al. further disclose that a pressure differential acts on the encasement to maintain the reduced volume of the diaper [0052]-[0054]. As discussed earlier, "intermediate volume" has been interpreted



Art Unit: 3761

to mean a volume existing during evacuation of air from the encasement. If I have a process comprising providing a diaper having a nominal volume, placing that diaper in an encasement, and then evacuating air from the encasement to provide a diaper of a reduced volume; then any volume that exists during evacuation of air from the encasement would be between the nominal volume and the reduced volume. As such, the reduced volume of the diaper would be inherently less than that of any intermediate volume of the diaper.

In regard to Claim 49, Kellenberger et al. disclose that the pressure differential comprises a difference between the pressures within the encasement and the ambient atmospheric pressure [0052].

In regard to Claim 50, as discussed for Claim 48, Kellenberger et al. meet the claim limitations for items a-g of the claimed invention. Kellenberger et al. further disclose that configuration of the packaged diaper and the nominal configuration of the diaper differ by at least one lengthwise fold in the diaper (Figures 1-9; [0039]-[0051]).

In regard to Claim 51, as discussed for Claim 42, Kellenberger et al. meet the claim limitations for items a-f of the claimed invention. Furthermore, it is disclosed that the diaper is packaged using a vacuum, this is it considered to be vacuum-packed ([0052]).

In regard to Claim 52, Kellenberger et al. disclose the encasement may comprise a tab to facilitate its opening ([0065]-[0066]).

In regard to Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable, including shirt or jeans pockets ([0005], [0067]). Since a conventional cigarette package is capable of fitting within shirt or jeans pocket, the packaged diaper

Art Unit: 3761

of Kellenberger et al. is considered capable of having a size no larger than a conventional cigarette package.

In regard to Claim 55, Kellenberger et al. disclose that the encasement may comprise a flexible polymer ([0058]).

In regard to Claim 56, Kellenberger et al. disclose that the packaged diaper may be cylindrical in shape (Fig. 11B, [0048]).

In regard to Claim 57, Kellenberger et al. disclose that the diaper may be folded into a cylindrical shape (Fig. 9, [0048]).

In regard to Claim 58, Kellenberger et al. disclose that the diaper may be folded into a substantially rectangular shape then placed into the encasement (Fig. 11A, Figs. 3-8, [0039-0047]).

In regard to Claim 59, Kellenberger et al. disclose that the thickness of the diaper is less than both its length and width, and further disclose that the packaging process reduces the dimensions of the diaper, including thickness ([0067-0071], especially [0067] and [0070], lines 1-4).

In regard to Claim 60, Kellenberger et al. disclose that the diaper is folded at least once along a dimension defining length (Figs. 3-8, [0039]-[0047]).

In regard to Claim 61, Kellenberger et al. disclose that the diaper is folded at least twice along a dimension defining length (Figs. 5-8, [0039]-[0047]).

In regard to Claim 63-64, Kellenberger et al. disclose that the diaper has a nominal length (Fig. 3) and may be folded in half lengthwise then folded again lengthwise into thirds (Fig. 7, [0046]). As a result, the resulting folded length would be  $1/6$  ( $1/2 \times 1/3$ ) of

Art Unit: 3761

the nominal length. Since the length of the folded diaper  $\frac{1}{6}$  of the length of the nominal diaper, the length of the foldedly reduced diaper is less than  $\frac{1}{3}$  of the nominal length of the diaper and is also less than  $\frac{1}{4}$  of the nominal length of the diaper. "Foldedly reduced length" has been interpreted to mean the length of the diaper after it has been folded—whether prior to or after being encased and reduced.

In regard to Claim 65, as discussed for Claim 42, Kellenberger et al. meet the claim limitations for items a-e and g of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 66, as discussed for Claim 42, Kellenberger et al. meet the claim limitations for items a-e and g of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 67, as discussed for Claim 44, Kellenberger et al. meet the claim limitations for items a-e and g-h of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 71, as discussed for Claim 48, Kellenberger et al. meet the claim limitations for items a-e and g of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 72, as discussed for Claim 49, Kellenberger et al. disclose that the pressure differential comprises a difference between the pressures within the encasement and the ambient atmospheric pressure [0052].

Art Unit: 3761

In regard to Claim 73, as discussed for Claim 50, Kellenberger et al. meet the claim limitations for items a-g of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 74, as discussed for Claim 51, Kellenberger et al. meet the claim limitations for items a-e of the claimed invention. As discussed for Claim 53, Kellenberger et al. disclose that the packaged diaper is pocketable.

In regard to Claim 59, Kellenberger et al. disclose that the encasement is substantially impermeable to moisture ([0060]-[0061]).

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kellenberger et al.

In regard to Claim 62, Kellenberger et al. disclose the claimed invention except for the packaged diaper having a foldedly reduced length and width that are both less than about 1/2 of the nominal length and width, respectively, of the diaper. However, Kellenberger et al. do teach folding a diaper so as to reduce its length and width (Figs. 3-8, [0039]-[0051]). Thus, it would have been obvious to one of ordinary skill in the art to foldedly reduce the diaper so as to have a length or width that are half of its nominal length and width, respectively, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable range involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

#### ***Allowable Subject Matter***

15. Claim 54 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keshia Gibson whose telephone number is (571) 272-7136. The examiner can normally be reached on M-F 8:30 a.m. - 6 p.m., out of the office every other Friday.

Art Unit: 3761

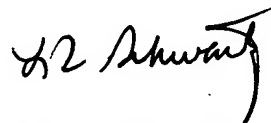
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Schwartz can be reached on (571) 272-4390. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Keshia Gibson  
Examiner, Art Unit 3761

klg 5/5/05



Larry I. Schwartz  
Supervisory Patent Examiner  
Group 3700



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